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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/618,165	07/17/2000	Jae Beom Choi	8733.039.20	8415
30827	7590	05/23/2005	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			BOUTSIKARIS, LEONIDAS	
			ART UNIT	PAPER NUMBER

2872

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/618,165

Applicant(s)

CHOI ET AL.

Examiner

Leo Boutsikaris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5, 7-15 and 17-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5, 7-15 and 17-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/084,583.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Terminal Disclaimer

The terminal disclaimer filed on 10/22/2003 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of U.S. Patent No. 6,292,296 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, 7-15, 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota (US 3,912,920).

Regarding claim 2, Kubota discloses a polarizer structure (Fig. 2) comprising a plurality of sections such as 31 and 32, each section comprising a plurality of transparent substrates 3a made of glass and producing polarized light (Fig. 1, lines 18-29, col. 2, lines 42-51, col. 3). However, Kubota does not disclose explicitly that the transparent substrates 3a causing the polarization of the incident light are made from quartz. However, Kubota does teach that polarization occurs when light strikes obliquely the plane of a transparent substance such as a glass plate (lines 42-58, col. 1). It would have been obvious to one of ordinary skill in the art at

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the time the invention was made to use quartz plates instead glass plates in the polarizer structure of Kubota, since quartz is similar to glass and it is less susceptible to external deleterious factors. Regarding the limitation that the polarizer structure comprises a holder supporting the plurality of the polarizer sections, it is noted that it is inherent that the device of Kubota shown in Fig. 2 includes a holder to support the polarizer sheet.

Regarding claims 3, 5, 13, 15, the glass polarizer sections are rectangular.

Regarding claims 7, 17, each section 31 comprises a plurality of glass substrates 3a (Fig. 1).

Regarding claims 9-10, 20-21, the plurality of the glass substrate parts is placed at a non-zero angle equal to the Brewster's angle relative to the normal line to the surface of the polarizer (lines 43-49, col. 1).

Regarding claims 11-12, the device of Kubota further includes a light source 1 for generating light, and means 2 for directing light onto the polarizer sheet (Fig. 2).

Regarding claims 4, 14, Kubota does not specify that the sections 31 or 32 are triangular in shape. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the polarizer section triangular, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Here, the result effective variable is the shape of the polarizer. A mesh of triangular shaped sections is more economical to make since it has fewer connecting edges.

Regarding claim 18, the means 2 for directing the light incident on the polarizer collimates the light (see Figs. 1-2, and lines 47-49, col. 2).

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Regarding claims 8, 22, it is inherent that the polarizer holder includes a light absorptive material, since any material, which is not a perfect reflector absorbs incident light.

Regarding claim 19, the stack of glass substrates 31 partially polarizes the incident light (lines 51-57, col. 2).

Regarding claim 23, the degree of partial polarization depends on the number of glass substrates 3a stacked on top of one another (lines 26-34, col. 3).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is 571-272-2308.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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May 18, 2005



LEONIDAS BOUTSIKARIS
PRIMARY EXAMINER